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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
PHILPOTT, JUSTIN M	

ART UNIT	PAPER NUMBER
2665	11

DATE MAILED: 09/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/075,150	PEKONEN, HARRI	
	Examiner	Art Unit	
	Justin M Philpott	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 July 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-51* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-51* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *6,7,9,10* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Amendment

1. In the Amendment filed July 7, 2003, Applicant has amended claims 1, 2, 14, 20, 24, 25, 30, 38 and 39 to recite new limitations. Specifically, with respect to the independent claims 1, 14, 24, 30 and 38, Applicant now recites the limitation of bursts of packets that include buffered content and the time-slice information. Applicant argues that the pending claims 1-51 should be allowed in view of the Amendment.

Also, Applicant declares (page 10) that the provided "Residence Address" in the original filed Declaration should also serve as the "Post Office Address". Thus, the Declaration is no longer objected to.

Further, Applicant has submitted previously cited documents requested by Examiner in the form of an Information Disclosure Statement. The submission is appreciated, and the documents, as well as other documents provided in additional Information Disclosure Statements, have presently been considered.

Response to Arguments

2. Applicant's arguments with respect to claims 1, 2 and 9, and equivalently claims 14, 24, 30, 38; 20 and 39; and 21, 27, 35 and 40 (pages 10-12) have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,477,382 to Mansfield et al. in view of the article by Salkintzis et al. entitled, "An In-Band Power-Saving Protocol for Mobile Data Networks" (IEEE, September 1998) previously cited by Applicant.

Regarding claims 1, 14, 24, 30, 38 and 43, Mansfield teaches a digital broadcasting communications system (FIGS. 1-3) that transmits and receives bursts of packets which include time-slice information (e.g., header 1015 comprising next page pointer 1010, e.g. see col. 3, line 36 – col. 4, line 50 and FIG. 10A). Mansfield teaches at a transmitter system (network 302, see FIG. 3) encapsulating information received from an information service provider (packet data services PDS service provider 102, 103) to form a packet header (1015) that contains time-slice information including a time-slice parameter (e.g., slot pointer field 1010; e.g., see col. 19, lines 51-67) specifying a relationship between a current packet of a current burst of packets and a subsequent burst of packets, wherein encapsulation is performed by the collective structure of systems 355, 380 and 361-365 (see FIG. 3) which provide functions of route calculation, fragmentation, re-assembly, and congestion mitigation functions (e.g., see col. 7, lines 8-19). Mansfield further teaches at a receiving system (e.g., MES 305) receiving and decoding the time-slice information thereby extracting information that specifies a relationship between a current packet of a current burst of packets and a subsequent burst of packets (e.g., see col. 10, lines 24-36).

However, Mansfield may not specifically disclose a buffer and may not specifically disclose bursts of packets include buffered content and time-slice information.

Salkintzis teaches an improved power-saving method for mobile data networks. Specifically, Salkintzis teaches temporarily buffering packets in a base station (e.g., see page 1196, col. 1, lines 4-5), and further teaches bursts of packets include buffered content and page information (e.g., see Fig. 3) wherein a downlink channel (e.g., see page 1196, col. 2, lines 1-5) comprises packets that include buffered content (e.g., data) and page information (e.g., pages). The teachings of Salkintzis provide improved power-saving characteristics (e.g., see page 1204, col. 1, lines 1-2) for mobile data networks. Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the teachings of Salkintzis to the system of Mansfield in order to provide still improved power-saving for mobile data networks.

Furthermore, as discussed above, Mansfield teaches page information (e.g., within header 1015 in FIG. 10A) comprises time-slice information (e.g., slot pointer field 1010). Thus, the system of Salkintzis in view of Mansfield as discussed above teaches bursts of packets include buffered content and time-slice information.

Regarding claims 2, 7, 20, 25, 31, 39, 44 and 48, Mansfield further teaches the time-slice information specifies an amount of time that elapses between transmissions of the current packet and transmission of a first transmission packet of the subsequent burst of packets (e.g., see col. 10, lines 24-36). Specifically, Mansfield discloses that time-slice information (e.g., via next page pointer) is used to determine the actual amount of time that is to elapse (lines 31-32) wherein the actual time value is loaded into a timer. While Mansfield discloses that a preferable embodiment comprises calculation means located at the mobile end system for determining the

actual amount of time that is to elapse, it is generally considered to be within the ordinary skill in the art to shift the location of parts absent a showing of unexpected results. Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to shift the location of the actual time calculation means from the mobile end system to the base station, since it is generally considered to be within the ordinary skill in the art to shift the location of parts absent a showing of unexpected results. The contention of obvious choice in design can be overcome if Applicant establishes unexpected results. In re Japikse, 86 USPQ 70 (CCPA 1950).

Further, regarding claim 7, the amount of time in a slot of Mansfield implicitly includes any transmitter-idle time between transmission bursts.

Regarding claims 3 and 34, the time-slice information (e.g., header 1015 comprising next page pointer 1010) of Mansfield specifies a duration for transmitting the current burst of packets, wherein the duration for transmitting the current burst of packets is determined using the number of time frames denoted by the time-slice information multiplied by the time frame length (e.g., see col. 10, lines 24-36).

Regarding claims 4 and 32, Mansfield teaches the header (1015) includes an index (e.g., CU field 1009 indicating slot utilization) for numbering originally transmitted bursts of packets (e.g., see col. 19, lines 48-50 and FIG. 10A).

Regarding claim 5, Mansfield teaches determining as far as eight possible paging intervals in advance (e.g., see col. 4, lines 22-25), and thus, anticipates a buffer substantially large enough to store at least two full bursts of data from the information service provider (e.g., PDS 102, 103) and any data to be transmitted between transmission of the two full bursts of data.

Regarding claim 6, Mansfield teaches the amount of time that elapses between transmitting the current packet and transmitting the first-transmitted packet of the subsequent burst is determined based at least in part upon how many packets will be transmitted between transmitting the current packet and transmitting the subsequent packet (e.g., see col. 3, line 66 – col. 4, line 25).

Regarding claim 8, while Mansfield may not specify a buffer type, the Examiner takes official notice that elastic, FIFO, ring and dual buffers are all well known in the art as available buffer types.

Regarding claims 9, 21, 27, 35, 40, 45 and 49, Mansfield teaches time-slice information (e.g., 1010) is placed into lower layer protocol packet header bits (e.g., see FIG. 10A wherein time-slice information 1010 is placed into lower layer packet header 1015 bits).

Regarding claims 10, 22, 28, 36, 41, 46 and 50, while Mansfield may not specifically disclose the lower layer protocol is DVB DSM-CC, the Examiner takes official notice that such a protocol is well known in the art to provide digital video broadcast. Furthermore, Mansfield teaches the invention may be used in virtually any type of communication system requiring receiving terminals or other equipment to be paged (e.g., see col. 5, lines 16-21). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to utilize the DVB DSM-CC section protocol to provide the power conservation technique of Mansfield with a digital video broadcast communications system.

Regarding claims 11, 23, 29, 37, 42, 47 and 51, Mansfield teaches the time-slice information is placed into at least one byte reserved but not used for media access control addressing (e.g., see col. 9, line 46 – col. 10, line 51, and FIGS. 4, 9 and 10A).

Regarding claims 12, 13 and 15-18, while Mansfield may not specifically disclose indexes of decreasing or increasing order or first/last packet indications, the Examiner takes official notice that such indexes and first/last packet indications are well known in the art of transmitting packet bursts.

Regarding claims 19, 26 and 33, Mansfield teaches a message number sub-field in ARQ 1011 which indicates whether the subsequent burst of packets is an original or a copy burst; wherein if the message number is the same as the previously received message the message is determined to be a copy, otherwise the message is determined to be an original (e.g., see col. 20, lines 8-39, specifically lines 23-26 and 32-33).

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin M Philpott whose telephone number is 703.305.7357. The examiner can normally be reached on M-F, 9:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D Vu can be reached on 703.308.6602. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.305.4750.

Justin M Philpott

HUY D. VU
SUPERVISORY PATENT EXAMINER
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